M 4.5, 30km SE of Markleeville, CA

Origin Time: 2021-07-09 01:46:00 UTC (Thu 18:46:00 local)
Location: 38.5087° N 119.5343° W Depth: 3.7 km

PAGER
Version 6

Created: 23 hours, 46 minutes after earthquake

Estimated Fatalities

65% · 30% · 4%

1 10 100 1,000 10,000 100,000
Fatalities

Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.
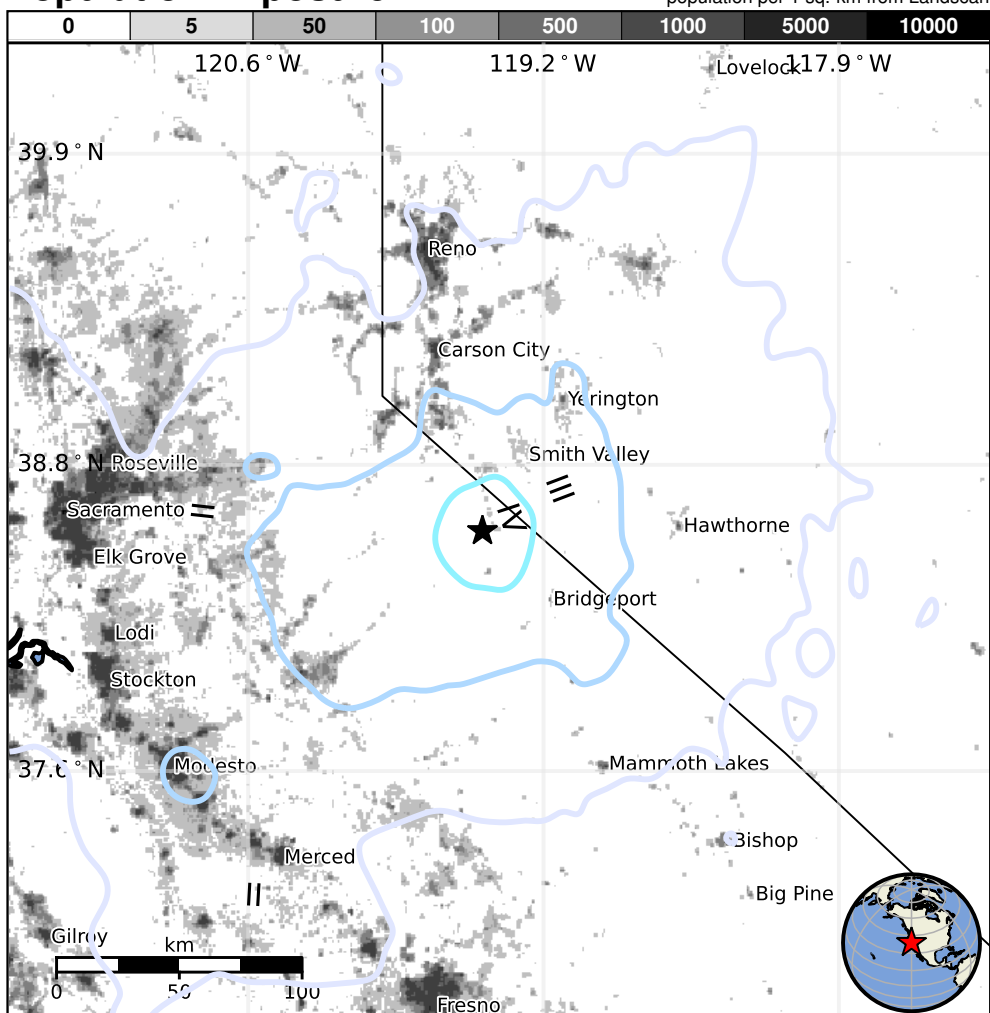
Estimated Economic Losses

65% · 30% · 4%

1 10 100 1,000 10,000 100,000
USD (Millions)

Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		1,489k*	5,089k	1k	0	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure

population per 1 sq. km from Landscan

0 5 50 100 500 1000 5000 10000

Structures

Overall, the population in this region resides in structures that are resistant to earthquake shaking, though vulnerable structures exist. The predominant vulnerable building types are unreinforced brick masonry and reinforced masonry construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
2003-12-22	348	6.6	VI(8k)	2
1980-01-24	211	5.8	VII(35k)	1
1989-10-18	250	6.9	VIII(109k)	62

Recent earthquakes in this area have caused secondary hazards such as landslides and liquefaction that might have contributed to losses.

Selected City Exposure

from GeoNames.org

MMI	City	Population
III	**Bridgeport**	**1k**
III	Cedar Ridge	1k
III	**Smith Valley**	**2k**
III	Smith	1k
III	Twain Harte	2k
III	Tuolumne City	2k
II	**Sacramento**	**466k**
II	**Carson City**	**55k**
II	**Stockton**	**292k**
II	**Reno**	**225k**
I	**Fresno**	**495k**

bold cities appear on map.   (k = x1000)